

RN01013

Serial number: 09/781,475

AMENDMENT

REMARKS/ARGUMENTS

It is asserted that these amendments do not add new matter and are supported by the specification and claims as originally filed. Amended claim 29 finds support in claims 23, 24 and 27 initially filed. New claim 57 finds support in claim 27 initially filed. claim 58 finds support on page 6, line t of the instant specification. Entry of these claims is respectfully requested.

Claims 29-42 and 45-55 have been rejected.

Claims 43 and 44 are objected to.

Claim 47 has been amended.

Claims 29-42, 45, 46, 48-55 are kept unchanged.

Claims 29-55 are pending in the application.

The dependency of claims 47 has been fixed.

The rejection of claims 24-42, 47, and 50-55 under 35 U.S.C. § 103 (a) as being unpatentable over Dransfield (U.S. Patent 5,336,521), in view of December (U.S. Patent 6,376,616), is respectfully traversed and is addressed in light of the comments below.

The invention relates to a process for making particles comprising at least one metal ion, using a specific water-soluble comb copolymer having anionic groups.

The comb polymer having anionic groups helps in this process and presents multiple functions comprising: controlling the growth of particles (page 3, lines 22-24), easing re-dispersion (page 3, lines 25-27), and stability on storage (page 2, lines 19-24).

The process is carried out in an aqueous medium (step a)), since no hydrophobic phase or medium is added.

The claimed process makes it possible the preparation very small (2 to 500 nm) and easily dispersible particles with an efficient control of the growth of said particles (please see the instant specification from page 3, line 18 to page 4, line 2.

Dransfield teaches a process for the manufacture of coated particulate zirconia comprising the steps of:

1) forming an aqueous dispersion comprising:

- particulate zirconia with a size less than or equal to 0.5 µm (500 nm), and
- a dispersing agent being a polymer (defined in column 3, lines 17-34),

2) carrying out an hydrolysis, thereby forming particles of zirconia coated with oxides of the particular metals listed in column 6, lines 32-36,

3) filtering in order to obtain a cake,

4) optionally milling (please see column 5, lines 8-10), and

5) recovering particles with a rather big size since there is not aggregates/agglomerates greater than 10 µm according to column 6, lines 4-5.

The Examiner agrees fails to teach the particular dispersing surfactant used in the instant invention. Applicant further respectfully submits that the Dransfield process does not provide a process for the manufacture of small and redispersible particles with an efficient control of the growth of said particles.

The reference teaches away from recovering small particles because a milling step can be necessary (please see column 5, lines 8-10), and the product obtained may present final particles with a size “no greater than 10 µm” (column 6, lines 4-5). Such a limit is understood by the one skilled in the art as big particles (far from less than 500 nm, as claimed).

RN01013

Serial number: 09/781,475

AMENDMENT

Indeed, Dransfield does not teach nor even suggest any means for controlling the growth of the hydrolysis product.

December describes a polymer for dispersing a pigment. December is mute about the pigment preparation. According to December's teaching, it is necessary to add the dispersant to the pigment upon grinding the pigment (col 8, lines 14-22). Therefore, December teaches away from using a dispersant when preparing pigments. December teaches the addition of a dispersing polymer after the preparation of the particles. Therefore, it is not relevant as far as the process for preparing particles is concerned.

Thus, December teaches more a milling more than hydrolysing a product in order to recover small redispersible particles.

Applicant respectfully submits that the one skilled in the art would not have been motivated to combining the two above discussed documents. The one skilled in the art would not have considered the teaching of December as relevant to a process for the preparation of particles. The one skilled in the art had no clue in the teaching of December that the polymers of the instant claims could help in controlling the growth of the particles and thereby in recovering small and redispersible particles.

For these reasons, Applicant respectfully requests that the Examiner now reconsider and withdraw the rejection of claims 24-42, 47, and 50-52 under 35 U.S.C. § 103 (a) as being unpatentable over Dransfield (U.S. Patent 5,336,521), in view of December (U.S. Patent 6,376,616).

The rejection of claims 45, 46, 48, and 49 under 35 U.S.C. § 103 (a) as being unpatentable over Dransfield et al. (U.S. Patent 5,133,955), in view of December (U.S.

RN01013

Serial number: 09/781,475

AMENDMENT

Patent 6,376,616), and further in view of Anderson et al. (US 6,413,590), is

respectfully traversed and is addressed in light of the comments below.

The above comments on Dransfield (U.S. Patent 5,133,955) and December (U.S.

Patent 6,376,616) are also relevant to address the outstanding rejection.

Anderson (US 6,413,590) teaches a process for the preparation of an ink jet media using an ink receptive coating mixture comprising a water-soluble polymer also capable of absorbing ultra-violet radiation leading to an excited state capable of undergoing photo-chemical reactions. The ink receptive coating mixture also comprises a mixture of polyvinyl alcohol or a copolymer thereof or a graft copolymer thereof. The function involved in Anderson's process (column 2, lines 24-30) for that mixture or copolymer or graft copolymer is to induce photo-chemical reactions (column 2, 12-24) and to cross-link with the water-soluble polymer (column 1, lines 43-45). That function is utterly different from the multiple functions of the water-soluble comb copolymer mentioned above. Thus, there is no motivation at all to combine Anderson with December and Dransfield in an attempt to retrieve the instant claimed invention.

For these reasons, Applicant respectfully requests that the Examiner now reconsider and withdraw the rejection of claims 45, 46, 47, and 49 under 35 U.S.C. § 103 (a) as being unpatentable over Dransfield et al. (U.S. Patent 5,133,955), in view of December (U.S. Patent 6,376,616), as applied above, and further in view of Anderson et al. (US 6,413,590).

RN01013

Serial number: 09/781,475

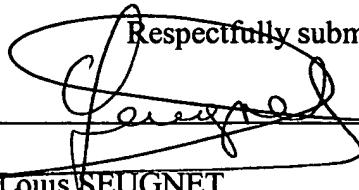
AMENDMENT

In view of the preceding remarks, it is asserted that the patent application is in condition for allowance. Should the Examiner have any question concerning these remarks that would further advance prosecution of the claims to allowance, the examiner is cordially invited to telephone the undersigned agent at (609) 860-4180. A notice of allowance is respectfully solicited.

May 07, 2004

Rhodia Inc.
259 Prospect Plains Road
CN7500
Cranbury, NJ 08512

By _____


Respectfully submitted,
Jean-Louis SEUGNET
Limited Recognition under 37 CFR §
10.9(b) enclosed.
Tel : (609) 860-4180
Fax: (609) 860-0503

RN01013Amend2